

REMARKS/ARGUMENTS

Claims 1-9, and 13 are pending. Claims 1, 8, and 9 have been amended to more particularly point out and distinctly claim Applicants' invention. No new matter has been introduced thereby. Applicants respectfully submit that the claims as amended comply with 35 U.S.C. § 112.

Claims 1-9 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Reuter et al. (U.S. Patent Publication No. 2002/0019923).

Applicants respectfully submit that independent claim 1 is novel and patentable over Reuter et al. because, for instance, Reuter et al. does not teach or suggest means for acquiring in advance from a host computer storage configuration information having information related to a logical volume identifier, a host computer identifier, a disk name, and a pair volume type recognized by the host computer.

Applicants respectfully submit that independent claim 8 is novel and patentable over Reuter et al. because, for instance, Reuter et al. does not teach or suggest a management computer acquiring storage configuration information of a memory device that is provided to a host computer, the storage configuration information having information related to a logical volume identifier, a host computer identifier, a disk name, and a pair volume type recognized by the host computer.

Applicants respectfully submit that independent claim 9 is novel and patentable over Reuter et al. because, for instance, Reuter et al. does not teach or suggest code for acquiring in advance from a host computer storage configuration information including a logical volume identifier, a host computer identifier, a disk name, and a pair volume type recognized by the host computer.

The present invention relates to a control method for when synchronization is required between a plurality of host computers when implementing definition changes for the host computers, and more particularly, due to the need for processing to be performed in synchronization with the respective host computers that use a primary volume and a secondary volume when a volume pair definition is implemented. The present invention includes a management server that instructs a host computer to perform configuration setup

and copying in accordance with the selection of a pair logical volume by a user. After copying is completed, the contents of storage configuration information is updated. An interface for this purpose is provided in the management server and host computer.

In accordance with the selection of a pair logical volume by a user, it is possible to sequentially control, from the management server:

- (1) the setting of a pair-related configuration inside a host computer;
- (2) the carrying out of a copying process inside a storage device; and
- (3) updating the contents of the storage configuration information after copying is complete to acquire storage configuration information that matches the control status inside the storage device (see, e.g., FIG. 3a; page 27, lines 9-24).

Reuter et al. relates to an operational method for partitioning a volume in a storage. When there is a change in a table showing the correspondence between a virtual disk segment and a physical disk segment and in a physical storage location corresponding to a virtual disk segment a controller 120, subsequent to setting a new physical disk segment for the virtual disk segment, instructs a plurality of host computers 140 to update the corresponding relationship between the virtual disk segment and the new physical disk segment (see, e.g., FIGS. 2 and 5; paragraphs [0050]-[0054]).

However, none of the following features of the present invention is disclosed in Reuter et al.:

- (1) storage configuration information having information related to a logical volume identifier, a host computer identifier, a disk name, and a pair volume type recognized by the host computer (In Reuter et al., a correspondence table of a virtual disk segment and physical disk segment is disclosed in Reuter et al., but Reuter et al. does not disclose the storage configuration information of the present invention. See, e.g., FIG. 2 of Reuter et al.);
- (2) the setting of a pair-related configuration inside a host computer and the carrying out of a copying process inside a storage device are sequentially controlled in accordance with the selection of a pair logical volume by a user (In Reuter et. al, the updating of the corresponding relationship between a virtual disk segment and a new physical disk segment, and updating instructions to a plurality of host computers in accordance therewith

are disclosed, but the sequential control in accordance with the selection of a pair logical volume by a user is not disclosed in Reuter et al.); and

(3) the content of the storage configuration information is updated inside the management computer subsequent to the completion of copying (Reuter et al. discloses updating instructions from a controller to a plurality of host computers, but does not disclose updating of the storage configuration information inside the management computer subsequent to the completion of copying. See, e.g., FIGS. 5A-5B of Reuter et al.).

For at least the foregoing reasons, claims 1-9 are novel and patentable over Reuter et al.

Claims 1 and 13 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Wang et al. (U.S. Patent No. 6,898,727).

Applicants respectfully submit that independent claim 1 is novel and patentable over Wang et al. because, for instance, Wang et al. does not teach or suggest means for acquiring in advance from a host computer storage configuration information having information related to a logical volume identifier, a host computer identifier, a disk name, and a pair volume type recognized by the host computer.

Wang et al. relates to a system switching method of an operation host which uses a storage. A controller 160 starts up a secondary host computer 120 in accordance with the failure of primary host computer 110 (see, e.g., FIGS. 3 and 4; column 16, line 33 to column 17, line 13).

As discussed above, independent claim 1 as amended more clearly recites the characteristic features for the storage configuration information. The setup method of the present invention for synchronizing (linking) and changing the storage definitions of a plurality of hosts (a primary volume-using host and a secondary volume-using host) at copy-pair definition is not shown in Wang et al.

In addition, none of the following features of the present invention is disclosed in Wang et al.:

(1) storage configuration information having information related to a logical volume identifier, a host computer identifier, a disk name, and a pair volume type recognized by the host computer;

(2) the setting of a pair-related configuration inside a host computer and the carrying out of a copying process inside a storage device are sequentially controlled in accordance with the selection of a pair logical volume by a user; and

(3) the content of the storage configuration information is updated inside the management computer subsequent to the completion of copying.

For at least the foregoing reasons, claim 1 and claim 13 depending therefrom are novel and patentable over Wang et al.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,



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